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ABSTRACT

This report details a year-long study of the emerging literacy of preschoolers and kindergarteners in two southwest Florida communities. Using a quasi-experimental design, investigation focused on two preschools and two kindergarten classes that implemented certain strategies associated with a whole language philosophy, including daily shared reading experiences and weekly opportunities to write freely. The classes and matched comparison groups were pretested and posttested with qualitative and quantitative measures, including the Goodman Book Handling Task, a story retelling inventory, the Metropolitan Early School Inventory (ESI), and the Metropolitan Readiness Test. Findings indicated that the preschool experimental classes performed significantly better than comparison groups on the Goodman Book Handling task, the story retelling inventory, and on subtest C of the ESI. Kindergarten experimental classes performed better than their comparison groups on the Goodman Book Handling task, subtests B, C, E, and F of the Metropolitan ESI, and the Metropolitan Readiness Test. Experimental subjects not only knew more than their comparison peers on meaningful aspects of reading, but exhibited enthusiasm for books and stories, and were observed developing attitudes toward literacy that are not measurable. Over 35 references are cited. (Author/RH)

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FERC RESEARCH PROJECT REPORT

PROJECT TITLE: Reading/Writing Readiness for Preschool and Kindergarten Children: A Whole Language Approach

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The following companies provided complimentary materials to the schools involved in the study. We gratefully acknowledge their vital contribution. They are DLM Teaching Resources, The Wright Group, The Rigby Corporation, and the Richard C. Owen Publishers.

Abstract

This report details a year-long study of the emerging literacy of preschoolers and kindergartens in two southwest Florida communities. Using a quasi-experimental design, the research staff studied two preschools and two kindergarten classes that implemented certain strategies associated with a whole language philosophy including shared reading experiences daily and weekly opportunities to write freely. These classes and their four matched comparison groups were pretested and posttested with both qualitative and quantitative measures including the Goodman Book Handling task, a story retelling inventory (all classes pre and post), the Metropolitan Early School Inventory (all kindergarten classes; preschool posttest only), and the Metropolitan Readiness test (kindergarten only).

Preschool experimental classes performed significantly better than comparison groups on the Goodman Book Handling task (.001), the story retelling inventory (.064), and on subtest C of the ESI called "How You Read" (.028). Kindergarten experimental classes performed better than their comparison groups on the Goodman Book Handling task (.000); the story retelling inventory (.022); the Metropolitan ESI, subtest B "Why You Read" (.016), subtest C, "How You Read" (.000), subtest E, "Message Writing" (.000) and on subtest F, "Story Structure (.009); and the Metropolitan Readiness Test (.000). Experimental subjects not only knew more than their comparison peers on meaningful aspects of reading, but exhibited

an inexpressible enthusiasm for books and stories, and were observed developing attitudes toward literacy that are not measurable.

Reading/Writing Readiness for Preschool and Kindergarten Children:

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Reading/Writing Readiness for Preschool and Kindergarten Children: A Whole Language Approach

Chapter 1: Need for the Study

"I believe that all education proceeds by the participation of the individual in the social consciousness of the race...the only true education comes through the stimulation of the child's powers by the demands of the social situations in which he finds himself" (Dewey, 1929, p. 3).

"Learning about reading and writing ought to occur in situations where written language serves functions such as to entertain, to inform, or to direct. In other words, children need to learn about the functions of written language and about what adults mean when they talk about 'reading'" (Anderson et al., 1985, p. 32).

The words of John Dewey echo from the past, but are similarly expressed in one of this decade's most acclaimed publications, Becoming a Nation of Readers (Anderson et al., 1985). Clearly, reading instruction needs to be meaningful and functional even in early childhood settings. Yet, many preschool and primary aged children do not experience meaningful or functional lessons in the name of reading or reading readiness. Although these premises of keeping language "whole" in its real-life forms and functions have been around for more than half a century, much instruction continues to present small, meaningless, isolated skills that focus merely on labeling or sounding letters of the alphabet.

Anderson et al., (1985) asserted that "from the very beginning children should be given all of the elements necessary for constructing meaning. This is important because reading at this level is a new enterprise, and children must be made aware that reading is always directed toward meaning" (p. 42).

As many teachers have approached us in recent years with a sincere desire to improve their strategies for instructing early reading and developing reading readiness, one consistent concern has been continually expressed. That concern is about how their students will perform on tests. Teachers who are willing and capable of modifying their methods to make language more "whole," meaningful, and functional for preschool and primary aged children question how their teaching will be viewed and how their careers will be effected if their students' test scores are inadequate. Teachers with limited confidence frequently feel paralyzed by the optional or mandated testing their schools administer.

In order for them to feel confident that test scores will be adequate, these teachers feel compelled to teach specific skills and formats used by test makers. This leads to meaningless lessons and isolated skills that bear little resemblance or relevance to literacy, and leave little time for creativity.

Of course, no research study, no matter how elaborate, can alleviate all teacher or administrator anxieties; and no study can generalize to all populations and situations. But the root of this study is to address the all too frequent question raised by

educators following whole language presentations and inservice sessions: "Yes, but how will children in whole language settings do on tests?"

Background

A great deal has happened in regards to emergent literacy in the United States in the last decade. For example, good children's literature, often including stories which are predictable and texts with repetitive rhyming patterns, are now readily available packaged in attractive sets, including those printed in the format of "big books." New publishers have become popular in a short time by filling a gap and making availabile "whole language" materials. Some of these publishers include the Wright Group, Developmental Learning Materials, The Rigby Corporation, and the Richard C. Owen publishers. Building on the experiences and traditions of The Foundations of Literacy, Holdaway (1979) established and refined many of these notions and theories in his native New Zealand.

Holdaway began with his own rural Maori children who lived in a depressed community. These children taught him some lifelong lessons. Namely, that "Literacy could be developed out of song and chant; that the preverbal expression of art could flower into language; and that fascination in stories led more directly to reading and writing than [his] own prepared lessons in word recognition" (1979, p.7).

Another change in the 1980's was an increased understanding of the interrelationship of reading and writing. Holdaway and others (Shanklin, 1982; Goodman, 1984) began to explore the implications of that relationship in instructional issues. Building on this increased understanding, the current research utilizes a quasi-experimental design that incorporates both reading and writing awareness in a longitudinal study. In order to study both beginning reading settings and beginning readers without the influence of conventional schooling, it was decided to conduct the study at the preschool and kindergarten levels. Children in experimental settings would be exposed to reading and writing in whole language contexts on a regular basis for an entire academic year, and compared to children in more traditional settings. Employing both elements of reading and writing in the research design would provide opportunities to explore current knowledge about the reading/writing connection.

It is the purpose of this study to add to a new but developing body of literature that specifically explores the learning outcomes of children in classrooms where whole language strategies are utilized. Documenting specific learning as it relates to emergent literacy in preschool and kindergarten students is outlined in fifteen research questions which can be found in Table 2, Chapter 3.

Review of Literature

There are a number of components within the scope of this study which could be reviewed. For example, one might review the use of predictable books in the teaching of reading, the whole language theory upon which the study is founded, the relationship between emergent reading and writing as parallel developmental processes, or the relationship between oral language learning and written language learning. However, for the purposes of brevity, this selected review will confine itself to research studies which utilized whole language assumptions and authentic reading and/or writing experiences to impact dependent variables such as tests. In all cases, the reviewed studies looked at a) contextualized language experiences in the form of literature, as opposed to reading experiences that were isolated and decontextualized and b) the relationship of this context in developing literacy and pupil attitudes toward books and reading.

As early as 1968, Dorothy Cohen (1968) looked at what she then called "retarded readers" in New York City schools. By this, she did not imply that the children were retarded, but that they were readers at risk. Many of these children, who were from all levels of elementary schools, were minorities from economically disadvantaged areas. The children in the experimental classes (N = 580) were bombarded with literature. The selections were judged appropriate to the children's conceptual levels, used natural language, and contained things with which children could

become involved. These selections became part of a treatment in which teachers read to the children daily. Activities that extended the literature and focused on student involvement accompanied the selections. The experimental classes showed a significant increase in vocabulary, word knowledge, reading comprehension, and quality of vocabulary, as measured on the Metropolitan Reading Achievement Test ($p = .005$).

In 1981, Beardsley (1981) compared two kindergarten classes in a northern Maine community. After pretesting with the Murphy-Durrell Pre-reading Ability Test, children in the experimental class received a treatment that consisted of the reading of selected, predictable trade books, using "assisted reading" (Hoskisson, 1975). These daily experiences lasted for 15 minutes each over a period of about 12 weeks. After posttesting Beardsley concluded that students in the treatment class were better able to read both familiar and unfamiliar words, and had better reading strategies than their peers used for comparison ($p = .05$).

A study with similar elements was conducted by McCormick and Mason (1984) to explore the question, "What can be done to increase preschool children's interest in and knowledge about reading?" They distributed what they termed "little books," books with simple story lines, repetitive text, and simple illustrations to parents of preschoolers from low and middle income families. The families received this packet when they brought their children

to school for the preschool screening that was administered by the local district. Half of the families received packets of books and instructions for reading to their children, as well as two other similar follow-up packets during the summer. The other half of the families received only the packets of books and instructions, with no follow-up. When they entered kindergarten in the fall, the children of both groups were tested on such knowledge as naming sings in and out of context, printing their names, printing words, naming upper case letters, spelling three or four letter words, reading common words of two or three letters, identifying consonant sounds, and attempting to read three of the familiar "little books." These students were tested again on the same measures in May, at the end of their kindergarten year. Based on a multiple regression analysis, the children whose families had received both the packets of books and the follow-up materials showed long-lasting effects of the treatment. They were better able to transfer their knowledge about print to the reading and spelling of new words.

Another study was constructed to determine the effects on slow readers of predictable materials as opposed to traditional preprimers. Bridge, Winograd, and Haley (1983) explored the effects of both predictable books and language experience strategies on first graders in a Kentucky town. The children were pretested with the Metropolitan Readiness Test and divided into two groups. The comparison group used a traditional preprimer

with the accompanying suggestions on the teacher's manual. Students were posttested, and a t-test was conducted. The researchers learned that the children in the treatment groups had developed better strategies for reading, and could vary their strategies instead of relying on sounding out words. The treatment groups scored significantly better on word recognition, and on a survey of interest in reading.

In Hawaii, Crowell, Kawakami and Wong (1986) designed an experimental kindergarten project with 25 randomly selected children from a variety of socio-economic backgrounds. The goal of the program, which was to benefit children from native Hawaiian or part Hawaiian families, was to bridge the gap between the child centered experiences of home literacy learning and those in the school setting. The researchers also wanted the children to develop a love for books and stories. Each day a message on the board that was relevant to the child's day became one focus of learning, including attending to written language conventions. In addition, stories were read aloud daily, with accompanying activities that included extensive opportunities for prediction. Children also wrote on topics of choice, although their responses ranged from drawings to invented spellings of connected text. Children shared their writing with others, and read independently. At the end of the school year, all children scored above the 50th percentile on the Gates Reading Test, with an average readiness score at the 86th percentile.

Gunderson and Shapira (1988) studied whole language teaching and learning in Vancouver, British Columbia. This program for multi-ethnic children was developed by two teachers over a period of five years. In a language rich environment, these children were immersed daily in reading and writing. All children wrote, whether they gave dictation to an adult or were able to produce readable text. These children produced a huge volume of writing. When the words the children had used were compared with the vocabulary list covered in the basal reader, it was discovered that the children were exposed to 18 times more words than those children who might have been limited to instruction in the basal.

Ribowsky (1985) investigated the comparative effects on kindergarten children of using code emphasis materials versus shared reading experiences. This year-long study, which involved two classes, pretested children using the Test of Language Development, The Book Handling Test, the Metropolitan Achievement Test, and others. The treatment groups focused on a natural language learning environment with frequent reading and writing experiences, while the code-emphasis group was highly structured with a multi-sensory format and traditional readiness skills. An analysis of variance revealed a significant main effect favoring the whole language group, indicating the treatment significantly effected the emergent literacy of the whole language class.

This review highlights the studies that are the most related to the study detailed in this report. It is apparent that studies

which document whole language strategies are not abundant. However, the similarities are striking in that they all yielded conclusions which favored and supported strategies born of whole language assumptions.

Chapter 2: Design and Methodology

This study consisted basically of eight research sites, four of which were kindergarten classes in public schools and four of which were private or church preschool classes of four year old children who would enter kindergarten one year after this study began. Half of the kindergartens were designated as experimental sites. Their teachers, after training, implemented a treatment for a period of one full academic year. At half of the preschool sites, care givers implemented the same treatment, consisting of "shared reading experiences," twice daily and unstructured, authentic writing experiences at least once per week. The research team visited all sites to observe, but made no attempt to influence any instruction at control sites.

Utilizing a quasi-experimental model, all subjects were pretested near the beginning of the school year and posttested near the end of that academic year. With the kindergarten subjects, both qualitative and quantitative measures were used. The researchers felt that both were important to include. Qualitative assessments yield more pertinent information about actual concepts and development in childhood education, but quantitative scores are often more highly valued by decision

makers such as administrators, legislators, and other members of the community.

Kindergarten students were pretested with the Goodman Book Handling task (BH) (Goodman and Altwerger, 1981), a story Retelling Inventory (RT), the Metropolitan Early School Inventory-Preliteracy (ESI) (1986) and the Metropolitan Readiness Test (MRT) (1986). These students were posttested on the same instruments.

Preschoolers were pretested using the Goodman Book Handling task and the story Retelling Inventory. The ESI was added to these for posttesting since, according to the ESI published documentation, it is considered appropriate for preschoolers who are within a few months of kindergarten eligibility. Other than this test standardized norm-referenced, quantitative assessments for preschool aged children are, fortunately, unavailable. Any group assessment at such a young age would be inappropriate for the maturational levels of most preschoolers.

During the course of the year, one or two members of the research team made site visitations taking detailed descriptive notes recording all that was taking place during the school's designated language arts time. Each site, whether treatment or control, was visited at least three times.

The selection of sites, description of treatment, teacher training, pretest and posttest instruments, and details of the statistical analyses are subsequently elaborated in this section.

Selection of Sites and Subjects

In the selection of the preschools to be used in this study, the first objective was to identify sites which had teachers and paraprofessionals who were interested in attending some training sessions to implement changes in their schools' curricula. Consultations were made with local early childhood professionals including one Title 20 supervisor, several directors of facilities, and selected members of the local Association for Children Under Six.

Recommendations from those professionals resulted in locating two pre-schools, one in county A and one in county B, that both had directors who were excited about participating, and would make the necessary commitments for themselves and appropriate staff. These commitments included agreeing to attend training sessions and implement the treatment for a period of one full academic year, and to having the occasional visitations by research staff to monitor the treatment and observe its implementation.

The second phase of selection was to identify comparable control sites. Directors at control sites were told only that the researchers were evaluating the use of new materials and that comparison groups were needed. Their commitments were limited to agreeing to have their four year old classes pretested and posttested, and agreeing to have occasional visitations by researchers so that the sites and the curricula could be described.

Experimental Preschool Site #1 (EP 1)

The staff at this site, located in county A, were excited to participate. The director, an early childhood professional, attended most training sessions, although the treatment at this school would be implemented by paraprofessionals. The director of EP 1 identified two members of her staff to attend training sessions and implement the treatment. Neither care giver was college educated, but both were enthusiastic, willing, and valued as capable members of their staffs. One of the two teachers was an African-American, and remained with the project throughout the year. A second teacher left the preschool in January due to a personal family relocation. Members of the research staff made several trips to the preschool to train the newly hired paraprofessional on site. This new paraprofessional did not have the enthusiasm and investment of the staff members who had been part of the project from the onset. She implemented the treatment mechanically, and probably inconsistently. Two or three subjects at this location were in her class.

All of the children in this school were African-Americans and resided in a low income neighborhood which was not integrated. The neighborhood continues to be one of a strong Black identity, but one plagued by frequent crime. About half of the children are placed in this preschool through the Title 20 program of federal assistance in which families pay little or no money for their preschoolers to attend, depending upon the particular family

situation. All families whose children attend this preschool pay reduced child care fees and qualify as low income.

The facilities at this site are attractive and adequate, but with few luxuries. Staff members are continually seeking small sources of funding for badly needed supplies, books, and capital improvements. Efforts are continually made to improve the program by adding new materials and toys, and by regular inservice for the staff.

Experimental Preschool Site #2 (EP 2)

The second site, located in county B, had mostly Caucasian children who were from a modest neighborhood. This site was privately owned and overseen by an individual owner. Some children at this site were from Title 20 families, and these four year olds attended the program for the full working day. The director of this facility was enthusiastic about participating in the study. She was a college educated individual whose degree was in an area unrelated to childhood education. She was the only care giver to implement the treatment at that site.

The facilities were fashioned in a converted modest-sized house. Facilities were adequate, but somewhat crowded, and decorated in a manner attractive to the children. Like most preschools, funds were limited for the purchasing of materials; thus, children often drew on discarded computer paper.

Control Preschool Site #1 (CP 1)

Identification of a control site comparable to EP 1 was relatively easy. A similar preschool located in the same neighborhood, about three miles from EP 1, was receptive to our request to act as a comparison group. This facility also had nearly all African-American children except for one Hispanic student in the four year old class. Children at this facility were also nearly all Title 20 children. As in the case with EP 1, the care givers for the four year old class were paraprofessionals. The facilities were adequate though somewhat crowded and, as in our other sites, somewhat lacking due to budget constraints.

Control Preschool Site #2 (CP 2)

The identification of a comparison group to somewhat match EP 2 was more difficult. The site whose director was receptive to participating on this limited scale was located in county A, owned by a large prosperous church, and in a higher income neighborhood than the other preschool sites. The students at this site personally owned collections of books and were read to by parents. The facilities at this preschool were built for this purpose, and were new and attractive. There were individual classrooms, instead of corners of a larger area, in which separate classes could take place. There were additional spaces for physical education.

Experimental Kindergarten Site #1 (EK 1)

This kindergarten was a logical choice for the study since the teacher was a whole language trained teacher in her third teaching year. She was also interested in assisting with the training of the other teachers in the treatment classes. Children in this county are typically grouped heterogeneously in the primary grades. The school principal described the class as similar to the other kindergartens in that school in terms of maturation. The teacher described the students as more immature than classes she had previously taught in terms of behavior and social skills. Observations by the researchers who visited tended to confirm the teacher's judgments.

This public elementary school is located in a modest area of town where there are affordable, modest, single family homes and duplexes. With the expansion of the neighborhood, the school was filled over its planned capacity with a number of temporary buildings, and construction for a new section of the school was in progress during the year of the study. Students in this kindergarten were mostly from working class Caucasian homes.

Experimental Kindergarten Site #2 (EK 2)

This school, located in county A is an alternative school, in that parents may elect to send children there no matter where they reside in the northern two-thirds of the district. The school is to maintain a 30% minority in its study body. This class had Hispanic, African-American and Caucasian students. It is somewhat

smaller than many newer schools and the school has a waiting list. The curriculum is still prescribed by the district office and does not differ from other public schools in that county.

The teacher who agreed to work with our study was interested in the whole language philosophy and anxious to learn more about it. She had been teaching for about eight years and was thought of as a very strong teacher. Her kindergarten consisted of homogeneously grouped students who were thought of as the least experienced and the least prepared for kindergarten. It was assumed that many might repeat kindergarten in the following year. More than half of the class were minority children (see Table 1).

Control Kindergarten Site #1 (CK 1)

With the help of the district primary specialist, a kindergarten class was identified in county B which had a similar profile to EK 1. The teacher of CK 1 was a veteran kindergarten teacher who had taught kindergarten as well as other grade levels for a total of more than 20 years. She was well thought of by her peers, but had attended no inservice related to whole language. Her room was large, bright, and attractive, with a strong traditional curriculum in which lessons were centered around the study of a weekly alphabet letter. Letters were personified as "letter people," and children did activities related to each letter of the alphabet. The teacher was receptive to the pretesting, posttesting, and occasional visitations of some of the researchers.

Control Kindergarten Site #2 (CK 2)

With the aid of the primary specialist in county A, a kindergarten class was identified with a profile similar to EK 2. This class was described as similarly immature and inexperienced. The teacher was a veteran teacher with some graduate level training in reading instruction who had taught other grades in addition to kindergarten. He was receptive to the testing and visitations that would be required, and was curious about the study. This class, like EK 2, had many minority children, both African-American and Hispanic.

Explanation of Instruments

The Book Handling Task (BH)

This qualitative assessment tool is a series of 25 questions that an examiner asks of a child using any unfamiliar picture book appropriate to the child's interest and conceptual levels. Similar to Clay's Sand Test (1972) and Stones Test (1979), the BH explores a child's concepts about books and print, including directionality, what a word is, and story structures. It was developed by Goodman and Altwerger (1981) for an earlier study in print awareness. The examiners asked all but two questions on the BH. These two were omitted because they were duplicated on the Retelling Inventory. In order to facilitate a comparative analysis, one point was assigned for each appropriate response the child gave. This heuristic was administered as a pretest and a posttest to every subject in the study.

The Retelling Inventory (RTI)

Based on the retelling portion of the Reading Miscue Inventory (RMI) (Goodman, Watson, and Burke, 1987), the RTI was individually administered to subjects both as a pretest and as a posttest. Developed by Kasten in its present form, the RTI differs from the RMI in that the story is read aloud to the child. The selection used for the RTI was "The Lion's Tail" (Reading Unlimited Series; Scott, Forseman & Co, 1976). This story is brief but contains essential elements such as a beginning, middle, and end, and was judged to have appeal to both mainstream and minority children. In addition, because the book in which the story appears is currently out-of-print, the researchers could be reasonably certain the story would be new to all children.

The examiner administered the RTI by first reading the story to the child, using the original text with pictures. With the book then removed, the child was asked to retell the story as best s/he could. Beginning with the "unaided retelling" (Goodman, Watson, and Burke, 1987), the examiner placed check marks on a prepared outline next to the name of characters and events mentioned by the student. The examiner would probe for maximum information from each subject by building on the subject's responses, such as "You mentioned the lion. Can you tell me more about him?" The examiners never asked direct questions which might introduce new information. The RTI was scored in terms of a percentage of the total that were possible by assigning points to

each character and portion of the plot retold. The same selection was used both as a pretest and a posttest. Potential practice effect was not considered to be a problem due to the duration of a full academic year between administrations.

The Metropolitan Early School Inventory-Preliteracy (ESI)

Published by The Psychological Corporation, the Metropolitan ESI is an individually administered instrument which is designed for use with children preparing to attend kindergarten and others not yet reading. It is designed to assess a child's knowledge about environmental print, connected discourse, story structure, and early writing. It consists of six subtests, all scores of which are presented in terms of percentages of correct responses. The ESI was used as a pretest and posttest on kindergartners, and as a posttest on preschool subjects.

Subtests A and B: What You Read and Why You Read. Utilizing a series of twelve strips, each with three pictures, the examiner asks the child prepared questions which are designed to elicit from the child which picture someone might read. For example, one strip contains a picture of a stop sign, a road, and urban buildings. The child is asked to identify the picture which contains something someone might read. Once the child responds to the questions on subtest A, "What You Read," the examiner probes further as to why the child chose that picture, requiring the child to justify his/her choice. These responses constitute the items for subtest B, "Why You Read."

Subtest C: How You Read. This subtest uses a brightly colored 8 1/2" x 11" cardboard sheet that contains on one side a picture and connected text. The picture consists of cats and dogs arranged randomly on the top portion of the card. Three short sentences of text are printed in teacher-style manuscript on the bottom half of the card. Using a series of ten questions, the child is asked to locate where reading begins; to show directionality; and to locate a word, a letter, a capital letter, a period, etc. Responses are entered in terms of percentages of correct answers.

Subtest D: Name Writing. The child is asked to write his or her name on the back of the scoring sheet. Outlines are provided for the examiner to score the child's production, offering up to four points from a range beginning with a scribble and ending with a conventional representation of his/her name.

Subtest E: Message Writing. The directions in this subtest requested subjects to write a message to someone, such as to their mothers or to their teachers. A guideline is furnished for the examiner to later score the productions, assigning up to six points for conventional writing. This subtest was omitted for the preschool subjects because it was judged by the researchers to be too difficult and frustrating for most preschool subjects.

Subtest F: Story Structure. The examiners were instructed to ask the teacher at each site to read "Goldilocks and the Three Bears" to the children on the day prior to testing. A standard

version, without pictures, was provided with the test and made available to each teacher. At the end of each testing session, the examiner asked the child to tell her the story of "Goldilocks," and was encouraged to do the best s/he could. Should the child refuse, a provision to permit the child to tell another familiar story was advised in the manual. Examiners scored each child's narration during the retelling based on a prepared checklist, looking for a beginning, an ending, dialogue, at least several sequential events, evidence of at least one character's feelings, etc. The subject was awarded a percentage of points for each item that could be checked off.

Criticisms of the ESI. The results of portions of the ESI in this study should be interpreted cautiously, especially subtests A, B, C and F. After using the test extensively, the content specialist researchers realized that portions or particular items lacked integrity, and may be invalid. For example, on subtest A there were several strips judged as poor items, and two as inappropriate. One strip contained pictures of a mixing bowl and spoon, a measuring cup with graduated lines, and a recipe. The child was asked to identify the one item someone would read. The manual lists the recipe as the sole correct response. However, in real life, measuring cups with graduated lines also contain print labeling. There are, therefore, two possible answers; but the test did not account for the second possibility. Another strip contains three pictures of open books. One book has blank pages,

one has pictures showing, and the other shows only print. This item is naive in that it expects a child to identify only the book with print. Children with extensive knowledge of books would, according to the manual, be penalized for identifying other items which could be justified as correct. As one kindergartner said, pointing to the book with pictures, "You can read this one, but the writing is on a different page." Another kindergartner said, pointing to the blank book which resembles a classroom journal, "You can read it if you write in it first."

On Subtest B, the proposed corrected responses to "Why You Read" were narrow and unrealistic. For example, on the book item just mentioned, the child was expected to answer that we read books "to learn new things; to find out more about something." In addition to the fact that these responses do not sound like language a child might use, reading for fun or pleasure or because it is a good story is not one of the acceptable answers. However, the examiners were trained and instructed to use their own judgments in accepting logical responses that were consistent with child language and development.

On Subtest C, "How You Read," the 8 1/2" x 11" cardboard artifact bears no resemblance to a book or anything else one reads in real life. This appeared confusing to subjects who would sometimes answer an identical question correctly in a real book, but appeared unable to answer it on a card containing print.

On Subtest F, "Story Structure," the content specialist researchers had concerns about the selection of the story of "Goldilocks." Many children who might already be familiar with the story have a distinct advantage over children who may hear it for the first time. Since the advantage may be tied to economic factors (e.g. some children at a higher SES site reported owning the book, and making regular public library visits), this selection may serve to highlight economically advantaged children. Also, the selection of this story may not be equally appealing or appropriate, either to mainstream or minority children, since it is of British origin (Sutherland and Livingston, 1984), and has narrative elements and style associated with the European tradition.

The content specialist researchers recommend that the ESI be revised (in view of the noted weaknesses) before it is used further in assessing young children's knowledge of emerging literacy.

The Metropolitan Readiness Test (MRT)

The MRT is a standardized, norm-referenced test that is administered to children in groups. This widely used instrument, which consists of several language related subtests, was used as a pretest (MRT Level 1) and posttest (MRT Level 2) on all kindergarten subjects. Although the documentation from the publisher states that the MRT could be used on preschoolers just before entering kindergarten, this was attempted and abandoned

after one trial on the preschool posttesting. Even with sufficient adult support, it was clear to the visiting researchers that these preschoolers lacked the social maturity to be assessed in a structured, group setting. In fact, in the opinion of these researchers, it may have been not only inappropriate for these preschoolers, but possibly inhumane to attempt to administer group assessments to children at this age.

The MRT attempts to assess in young children traditionally valued readiness skills including letter knowledge, initial sounds, ending sounds, the sounds of consonant clusters, etc. Subtests yield individual raw scores as well as a composite score for the entire test, and each of these can be translated into a percentile and stanine.

Description of Pre Testing and Post Testing

The pretesting of the subjects began in September, 1988, while teacher training sessions were still being held. A schedule was negotiated with each teacher to be compatible with her/his curriculum. Testing at all sites was generally started early in the morning when it was thought that the children were at their best.

The content specialist researchers trained one graduate level assistant by testing the same subjects simultaneously and comparing results for reliability. The entire testing process took longer than was originally planned. During individual testing, preschoolers often took longer than expected because they

sometimes had to get up to use the bathroom, got off-task telling the examiners matters of importance to them, or because the novelty of the individual testing setting was completely new. Some preschoolers had to be talked into going with an examiner to "do special things and look at some books" because they were extremely shy. Consequently, testing of all individuals might have taken two or more days per site, with two examiners working at the site at one time.

With only limited funding, allowing for only three trained examiners, no more than one site could be tested on any given day. An unexpected chicken pox epidemic made absenteeism high during the testing period, causing the visiting researchers to have to return to each site numerous times to test individuals as early as possible after their return to school. Because of the extended absences of some children, it was necessary to give the last pretests to certain individuals at each site up to one month after the testing first began.

Individual testing of the kindergarten classes was done first. Standardized testing of kindergarten students was somewhat delayed by the late arrival of the test booklets and by the high absenteeism caused by the chicken pox. Therefore, the MRT was administered approximately one month later than individual qualitative measures. A consultant was hired to help with the consistent monitoring of this testing. In addition, the teachers involved in both the experimental and control groups provided

assistance. The training of the experimental group teachers was completed prior to the completion of the MRT testing, and had been implemented in the experimental classes.

The actual MRT testing of kindergarten students was always done in the same way with the same number of monitors present to help insure that children were on the correct page and line of the test. The group testing situation was observably taxing and tiring for five year old children. The posttesting schedule was designed to be parallel to the pretesting schedule in terms of administering individual testing prior to the MRT, and to test sites in the same sequence in which they were pretested to insure comparable instructional time.

Summary of Preschool Testing

All preschool four year old children were tested individually with the Goodman Book Handling task and the story Retelling Inventory. They were similarly posttested with both these heuristics and the Metropolitan Early School Inventory-Preliteracy. Each of these instruments has been described earlier. The preschoolers were not pretested with the ESI because the publisher's accompanying documentation described this test as not being appropriate for children a full year before kindergarten eligibility.

Summary of Kindergarten Testing

All kindergarten subjects in experimental and control sites were given the Goodman Book Handling task, the Retelling

Inventory, and the Metropolitan Early School Inventory-Preliteracy, but in no particular order. The Metropolitan Readiness Test, was administered in group settings after the individual testing was completed. The same sequence was repeated for posttesting. All instruments are described earlier.

Training of Teachers

The training of the teachers of the experimental group consisted of four afternoon sessions held on the Sarasota Campus of the University of South Florida. A talented teacher educator from one of the two school districts was invited to participate in the study by presenting the basic training. Sessions began with an overview of whole language foundations and theory. Specific strategies related to emergent reading and writing were taught and practiced. The small size of the group facilitated interaction between the teachers more experienced in whole language and those who were newer to the concept.

A kindergarten teacher whose class became one experimental site was already experienced in whole language teaching. She assisted in the training by providing classroom examples, student produced work, and answering teacher questions about specifics of management and implementation. For the final session, kindergarten children were present. With the help of these children, teachers viewed demonstration teaching and had an opportunity to try out whole language strategies. The expectations for the daily specific guidelines of treatment were

reviewed with the teachers. The content specialists researchers made follow up visits to each site during language arts time to monitor implementation.

Description of Treatment and Materials

After the completion of the training, each treatment group teacher was asked to implement at least two things into the daily curriculum. First of all, shared reading experiences, using predictable or patterned language books, were to be used with the subjects at least twice a day, for a minimum of fifteen minutes each time. Teachers were asked to use "assisted reading" (Hoskisson, 1975) with a pointer following along the text while the shared reading experience was taking place. Teachers were encouraged to extend the shared reading experiences to include dramatization of the story, using the text to teach concepts and skills, and anything else their creativity might invent. No effort was made to influence any other part of the curriculum in terms of specifying what else should or should not be included.

The second aspect of the minimal treatment involved giving students an opportunity to write at least once per week. Writing was clearly defined for the teachers as an opportunity for students to either write inventedly, or give oral dictation to an adult who would write verbatim the student's text. Writing was therefore carefully distinguished from copying letters or symbols from a model, or the practicing of letter formation such as in handwriting or penmanship. Writing, in the experimental

classrooms generally was geared toward a topic children were studying, related to the shared reading experience of that day, or viewed as a personal "journal."

Since each experimental site would be employing shared reading twice daily for an entire school year, the materials available at each site had to be reviewed. The kindergarten classrooms had varying amounts of big books and predictable children's literature accessible. Generally, however, the preschool sites had almost no appropriate materials.

Publishers of big books and other predictable whole language materials were contacted by the research staff to solicit contributions to the experimental classrooms. Responses were obtained from The Wright Group, Developmental Learning Materials, The Rigby Corporation, and Richard C. Owen Publishers. Each company made generous donations of materials. While not every site could be supplied with materials from each company, there were enough materials to circulate new, fresh materials to each site at certain points during the year.

It is important to note that although a minimal treatment was requested by the researchers, more time reading and writing may have resulted. First of all, one of the teachers, an already experienced teacher, employed writing into her curriculum daily instead of weekly. Secondly, the children began not only to request the reading of their favorite predictable books, but soon began to "play" at doing shared reading experiences in pairs,

small groups, or even alone during self-selected creative play times. Playing with books often became more popular than playing with conventional toys. Children in the treatment groups, both of kindergartners and preschoolers, could even be observed reading big books on the playground in small groups, one child role-playing the teacher, reading and pointing to the text. This pretend reading might have been an approximate representation of the story, a storytelling related to the story or, later in the year, an actual reading of the book. Some specific anecdotes depicting actual shared reading experiences and their extensions are included in the later discussion of "Developing Attitudes Toward Literacy," Chapter 4.

Chapter 3: Results of the Study

This study's design included experimental and control groups both of preschool and kindergarten children. Each experimental and control group had two classes of children. The children came from schools in two Florida counties. Preschool children attended Title 20 funded or private/church schools, while kindergarten students attended public schools. Participating preschools were selected by recommendations of Title 20 staff, district school staff, and representatives of one of the county's Association of Children Under Six. The Primary Education Specialist in each county selected the participating schools from which the kindergarten classes were chosen. Efforts were made to obtain

comparable E and C groups. In general, the data in Table 1 indicates this goal was achieved.

Pretest data were collected from late September through October 1987; posttest data were collected from late April through May 1988. The two content specialists researchers and one graduate level assistant were used to collect data in the preschools and kindergartens. The data were recorded on forms for key entry by a graduate level assistant at USF. The entered data were analyzed by staff contracted by the school board of one of the participanting counties. The data were analyzed using ANOCOVA procedures as specified in SPSS/PC+ (SPSS, 1986). The same four co-variates were used in all 16 analyses: gender, ethnicity, pretest Retelling Inventory score, and pretest Goodman Book Handling task score. Information on the ANOCOVAs is contained in Tables 3-18.

There were 15 research questions, 13 of which were tested. (Upon examination of the data it was determined that two of the research questions were not directly measured by the instruments used.) Eight instruments or parts of instruments were used to test those 13 questions. A brief statement of the questions, instruments used, and significance of the statistical tests calculated are contained in Table 2.

As can be seen from Table 2, there were 25 tests of significance. Eighteen were significant at the .10 level. Of the 11 tests done on the preschool data, 6 were significant; of the 14

Table 1

Demographic Characteristics of E and C Groups

			Gender		Ethnicity				
Grade/Group	Type	n	M	F	W	B	H	O	Co
Preschool									
E	Title 20	10	5	5		10			A
C	Title 20	13	5	8		10	3		A
E	private	14	7	7	12	2			B
C	church	20	9	11	20				A
Kindergarten									
E	public	14	7	7	13		1		B
C	public	17	7	10	8	7	1	1	B
E	public	16	10	6	8	7	1		A
C	public	16	11	5	8	7	1		A

Note. Co = County

Table 2

Research Questions, Instruments, and Significance Levels

Research Questions	Instrument[a]	Sign.
1. The Pre[b] Es will have more highly developed knowledge of letters.	not tested	NA
2. The K[c] Es will have more highly developed knowledge of letters and sound correspondence.	MRT-Auditory	.000
3. The Pre Es will be better able to discriminate print from pictures and shapes.	ESIP-A	.170
	Book Handling	.001
4. The K Es will be better able to discriminate print from pictures and shapes.	ESIP-A	.148
	Book Handling	.000
5. The Pre Es will have a better understanding of the function of reading.	ESIP-B	.144
	Book Handling	.001
6. The K Es will have a better understanding of the function of reading.	ESIP-B	.016
	Book Handling	.000
7. The Pre Es will have more highly developed concepts about print.	ESIP-A	.170
	ESIP-C	.028
	Book Handling	.001
8. The K Es will have more highly developed concepts about print.	ESIP-A	.148
	ESIP-C	.000
	Book Handling	.000
9. The Pre Es will have more highly developed concepts about writing.	not tested	NA

(table continues)

Research Questions	Instrument[a]	Sign.
10. The K Es will have more highly developed concepts about writing.	ESIP-E	.000
11. The Pre Es will have more knowledge of story structures.	ESIP-F	.368
	Retelling	.064
12. The K Es will have more knowledge of story structures.	ESIP-F	.009
	Retelling	.022
13. The Pre Es will have higher retelling/comprehending ability.	ESIP-F	.368
	Retelling	.064
14. The K Es will have higher retelling/comprehending ability.	ESIP-F	.009
	Retelling	.022
15. The K Es will perform better on a norm referenced standardized test.	MRT-Composite	.000

[a]Instruments are: MRT = Metropolitan Readiness Tests.

ESIP-A = Early School Inventory Preliteracy-What You Read.

ESIP-B = Early School Inventory Preliteracy-Why You Read.

ESIP-C = Early School Inventory Preliteracy-How You Read.

ESIP-E = Early School Inventory Preliteracy-Message Writing.

ESIP-F = Early School Inventory Preliteracy-Story Structure.

Book Handling = Goodman Book Handling.

Retelling = Retelling Inventory.

[b]Pre = preschool subjects.

[c]K = kindergarten subjects.

tests done on the kindergarten data, 12 were significant. The following tables list the questions that the researchers asked and the main effects of each outcome.

Explanation of Tables 2-18

Table 2 summarizes the fifteen research questions, the instruments used, and the significance levels of the outcomes. These findings will be explained separately in the preschool and kindergarten data in the subsequent section.

Tables 3-7 summarize the results of each subtest of the Metropolitan ESI posttest for preschoolers. In line 2 of each table, the main effects and its levels of significance can be found. Readers should note that where main effects have a significance level listed of .000, the significance level was at such a low probability that the SPSS program stopped computing past three decimal places. Table 8 summarizes the posttest data on preschoolers for the story Retelling Inventory. Table 9 similarly summarizes the preschool posttest data on the Book Handling task.

Tables 10-15 summarize each subtest of the Metropolitan ESI for kindergarten subjects' posttests. Again, main effects and significance level can be found in the second line of each table. Table 16 summarizes the kindergarten story Retelling Inventory posttests. Table 17 similarly summarizes the Book Handling task posttests of the kindergartners. Table 18 summarizes the

Table 3

ANCOVA Preschool ESIP-A Posttest Data

Source	df	MS	F	p
Covariates[a]	4	6210.567	5.625	.001
Main effects	1	2136.190	1.935	.170
Explained	5	5395.692	4.887	.001
Residual	51	1104.103		

Note. ESIP-A = Early School Inventory Preliteracy-What You Read.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 4

ANCOVA Preschool ESIP-B Posttest Data

Source	df	MS	F	p
Covariates[a]	4	7702.465	9.874	.000
Main effects	1	1713.513	2.197	.144
Explained	5	6504.674	8.339	.000
Residual	51	780.037		

Note. ESIP-B = Early School Inventory Preliteracy-Why You Read.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 5

ANCOVA Preschool ESIP-C Posttest Data

Source	df	MS	F	p
Covariates[a]	4	6545.805	20.349	.000
Main effects	1	1642.638	5.106	.028
Explained	5	5565.172	17.300	.000
Residual	51	321.681		

Note. ESIP-C = Early School Inventory Preliteracy-How You Read.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 6

ANCOVA Preschool ESIP-D Posttest Data

Source	df	MS	F	p
Covariates[a]	4	3.878	2.642	.044
Main effects	1	3.757	2.559	.116
Explained	5	3.854	2.625	.035
Residual	51	1.468		

Note. ESIP-D = Early School Inventory Preliteracy-Name Writing.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 7

ANCOVA Preschool ESIP-F Posttest Data

Source	df	MS	F	p
Covariates[a]	4	1232.172	1.551	.202
Main effects	1	654.793	.824	.368
Explained	5	1116.696	1.405	.238
Residual	51	794.651		

Note. ESIP-F = Early School Inventory Preliteracy-Story Structure.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 8

ANCOVA Preschool Retelling Inventory Posttest Data

Source	df	MS	F	p
Covariates[a]	4	2523.930	3.316	.017
Main effects	1	2734.872	3.593	.064
Explained	5	2566.118	3.371	.010
Residual	51	761.165		

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 9

ANCOVA Preschool Book Handling Posttest Data

Source	df	MS	F	p
Covariates[a]	4	369.204	28.017	.000
Main effects	1	157.145	11.925	.001
Explained	5	326.792	24.798	.000
Residual	51	13.178		

Note. Book Handling = Goodman Book Handling Test.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 10

ANCOVA Kindergarten ESIP-A Posttest Data

Source	df	MS	F	p
Covariates[a]	4	733.183	5.149	.001
Main effects	1	306.693	2.154	.148
Explained	5	647.885	4.550	.001
Residual	57	142.388		

Note. ESIP-A = Early School Inventory Preliteracy-What You Read.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 11

ANCOVA Kindergarten ESIP-B Posttest Data

Source	df	MS	F	p
Covariates[a]	4	3399.300	6.175	.000
Main effects	1	3368.381	6.119	.016
Explained	5	3393.116	6.164	.000
Residual	57	550.479		

Note. ESIP-B = Early School Inventory Preliteracy-Why You Read.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 12

ANCOVA Kindergarten ESIP-C Posttest Data

Source	df	MS	F	p
Covariates[a]	4	1876.800	8.833	.000
Main effects	1	4013.320	18.888	.000
Explained	5	2304.104	10.844	.000
Residual	57	212.478		

Note. ESIP-C = Early School Inventory Preliteracy-How You Read.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 13

ANCOVA Kindergarten ESIP-D Posttest Data

Source	df	MS	F	p
Covariates[a]	4	1.639	4.014	.006
Main effects	1	.494	1.210	.276
Explained	5	1.410	3.453	.009
Residual	57	.408		

Note. ESIP-D = Early School Inventory Preliteracy-Name Writing.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 14

ANCOVA Kindergarten ESIP-E Posttest Data

Source	df	MS	F	p
Covariates[a]	4	6.782	3.524	.012
Main effects	1	53.773	27.940	.000
Explained	5	16.180	8.407	.000
Residual	57	1.925		

Note. ESIP-E = Early School Inventory Preliteracy-Message Writing.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 15

ANCOVA Kindergarten ESIP-F Posttest Data

Source	df	MS	F	p
Covariates[a]	4	1782.554	3.163	.020
Main effects	1	4079.209	7.238	.009
Explained	5	2241.885	3.978	.004
Residual	57	563.583		

Note. ESIP-F = Early School Inventory Preliteracy-Story Structure.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 16

ANCOVA Kindergarten Retelling Inventory Posttest Data

Source	df	MS	F	p
Covariates[a]	4	982.356	3.165	.020
Main effects	1	1722.822	5.551	.022
Explained	5	1130.450	3.642	.006
Residual	57	310.362		

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 17

ANCOVA Kindergarten Book Handling Posttest Data

Source	df	MS	F	p
Covariates[a]	4	108.356	11.948	.000
Main effects	1	505.405	55.731	.000
Explained	5	187.766	20.705	.000
Residual	57	9.069		

Note. Book Handling = Goodman Book Handling Test.

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

Table 18

ANCOVA Kindergarten MRT Composite Posttest Data

Source	df	MS	F	p
Covariates[a]	4	1028.948	11.766	.000
Main effects	1	2521.171	28.830	.000
Explained	5	1327.393	15.179	.000
Residual	57	87.451		

Note. MRT Composite = Metropolitan Readiness Test Composite Score

[a]Covariates were gender, ethnicity, pretest Retelling Inventory, and pretest Goodman Book Handling Test.

composite posttest data on the Metropolitan Readiness Test which was administered only to kindergarteners.

Summary of Preschool Posttest Results

Preschool subjects in the experimental classrooms showed significantly more development than their comparison group in the ESI subtest C, How You Read. On subtest A., What You Read, and on subtest B, Why You Read, alpha levels are not considered significant ($p = .10$).

Concerning subtest A, which examines what you read in environmental and commercial print, the researchers believe, as Goodman (1980) suggests, that environmental print is the most accessible of "the roots of literacy" and, therefore, all subjects had equal access to this knowledge regardless of school curricula. Subtest B, Why You Read, was also not significant. However, the issues are quite different in subtest B than in subtest A. First, subtest B asks subjects to defend their responses to items on subtest A. Many preschoolers in both treatment and control groups were unable to do this. Preschoolers may lack the oral language maturity and facility to explain their thinking. The second issue, as was noted in the criticisms of the ESI, is the narrow range of responses considered acceptable in the examiner's manual. The suggested acceptable responses did not, in the opinion of the researchers, include authentic child-like responses and did not allow for the full range of logical possibilities. Therefore, the results of subtest B should be interpreted cautiously.

The results of preschool posttest C, How You Read, were significant ($p = .10$). This subtest is the most compatible with actual early reading behaviors and with developing concepts of print. The researchers consider the results of this subtest to be the most valuable in interpreting the ESI outcomes because this subtest of the ESI most closely resembles real reading situations.

The ESI subtest D, Name Writing, was not significantly different between E and C groups. The visiting researchers noted during site observations that all preschool sites directly instructed the children in the writing of their own names. Because subtest E, Message Writing, was judged by the researchers as too difficult for preschoolers, it was not administered.

ESI subtest F, Story Structure, was not significant (Table 7). The content specialist researchers feel the selection by the publishers of the story, "Goldilocks and the Three Bears," may render this subtest invalid because children from mainstream homes are typically familiar with the story, and children from minority homes may be less familiar with it. These minority children may have either no background or a different background in literature and oral tradition. For further elaboration of the criticisms regarding all subtests of the ESI, please refer to Criticisms, Chapter 2.

As Table 8 describes, preschool E subjects scored significantly higher ($p = .10$) on the story Retelling Inventory than did their comparison peers. In this case, the story selected

was unfamiliar to all subjects, was judged by the examiners to be culturally neutral, and was well received by the subjects. The researchers believe this instrument more accurately assessed the children's knowledge of story structure rather than, as in "Goldilocks," assessing the children's background knowledge.

As presented in Table 9, the SPSS computed significance level was .001 in comparing preschoolers' knowledge on the Book Handling task. It is interesting to note that this test has some duplication of the type of questions found in ESI subtest C, How You Read. The researchers believe that the utilization of a real book, as opposed to an 8 1/2" x 11" sheet of cardboard containing limited connected discourse may have caused the difference. During posttesting the researchers who made visits observed that the contrived artifact used in ESI subtest C caused some confusion in certain preschoolers, and may have interfered with the students' understandings of both the questions and the answers.

Summary of Kindergarten Posttest Results

The results of kindergarten posttest data on the ESI subtest A, What You Read, subtest B, Why You Read, and subtest C, How You Read, are described in tables 10, 11, and 12 respectively. As in the case of the preschool data, subtest A was not significant ($p = .10$), probably for the same reasons elaborated in the previous section. However, the differences on subtests B and C were significant.

Kindergarten posttest D, Name Writing (Table 13), was not significant. Both districts involved in this study considered name writing an exit skill for kindergarten and it was universally taught.

The results of posttest E, Message Writing (Table 14), in the kindergarten settings was significant (SPSS computed level less than p = .000). These results, which are believed by the researchers most likely to be related to teacher expectations, risk-taking, and underlying teacher assumptions, are discussed at length in Chapter 4.

Kindergarteners' knowledge of story structure, assessed in ESI subtest F (Table 15) and in the Story Retelling inventory (Table 16), was significant on both instruments (p = .10). Similarly, the results of the kindergarten posttest of the Book Handling task are also significant (Table 17).

Table 18 describes the only norm-referenced standardized measure in this study, and was administered only to kindergarten subjects. The instrument used, the Metropolitan Readiness Test, is widely administered throughout the United States and is often the only type of test data valued by decision makers such as administrators, legislators, and community leaders. It is interesting to note that the significance level computed by the SPSS program was .000.

Many early childhood professionals believe that this quantitative, group administered device yields less useful

information on individual children in assessing and planning the programs for kindergarteners than do the qualitative, individually administered tests used in this study.

The placement of many children for first grade or retention in kindergarten is often influenced by the results on the MRT, or similar instruments. These researchers believe that the information on the MRT and similar instruments is insufficient to be the role determines for making crucial decisions that effect children's educational lives. The omission of more qualitative heuristic devices is both inappropriate in facilitating responsible educational planning and unjust in serving the children's educational needs.

Discussion

Preschool subjects in the experimental sites in this study scored significantly higher ($p = .10$) than subjects in control groups in three different areas: The Book Handling task, the story Retelling Inventory, and the Metropolitan ESI, Subtest C, How You Read. In analyzing the actual skills assessed by these instruments, it is apparent that the experimental preschoolers knew more in a number of areas considered vital to beginning reading instruction.

Experimental preschoolers were better able to listen to stories read aloud, and then repeat some of those stories, thus modeling a knowledge of story structure. Their retellings incorporated literary language found in children's books, such as

"Once upon a time...," favorite repeated phrases, memorable character dialogues, and conventional endings like "They lived happily ever after."

Another area of strength in the experimental preschool results included specific knowledge about books and how they work. For example, these children understood terminology such as "the cover of the book," "the title page," and what it means to be an author or an illustrator. They knew where to locate the beginning of text, the directionality of print, when to turn pages, and where a story concluded. They also understood concepts labeled by Downing (1970) as the reading instruction register. These included "letter," "word," "page," "book cover," "front," "back," "top," etc. These children understood that the story was conveyed in the print, that the pictures served to complement print, and they were aware of the bound configuration of words.

Most importantly, the observations made by the visiting researchers own time and all sites leads them to conclude that the preschoolers were observed falling in love with books and developing positive attitudes toward books and literacy. This statement seems inadequate in describing the observed overwhelming enthusiasm and passion for books demonstrated by these children. They began to treat these predictable, patterned language books much as they did a favorite toy or teddy bear. This quality is not measured on any of the assessment instruments used. At this

point, it can only be inferred from the many observations made during the course of this study.

The kindergarten experimental subjects performed significantly better ($p = .10$) than their comparison peers in all aspects of this study except Metropolitan ESI subtest A, What You Read, and subtest D, Name Writing. As discussed previously, these results are logical because environmental print, addressed in subtest A, is equally accessible to all learners and name writing, subtest D, is part of the standard kindergarten curriculum. The kindergarten subjects also took the MRT. The results of the MRT indicated that the experimental kindergartners performed significantly better ($p = .10$) than their counterparts on all subtests, and on the composite score.

All competencies previously noted for preschool subjects also describe the behaviors successfully demonstrated by kindergartners. In addition to these behaviors, kindergarten subjects were better able to explain why reading takes place (ESI subtest B), and were able to better retell the story of "Goldilocks and the Three Bears" (subtest F) with elements of literary structure. Kindergarten subjects in the treatment classes seemed to differ markedly from their comparison peers in subtest E, Message Writing. All experimental subjects produced some message when instructed to do so, while the control students tended to inform the examiners that they were unable to write. The experimental kindergarten subjects produced written utterances

varying from random letter string formations to nearly conventional writing. It became clear that these kindergartners believed they had been admitted to the "literacy club" (Smith, 1986).

As demonstrated on the MRT, the experimental kindergartners had internalized many specific skills traditionally valued in reading readiness. They were better able to recognize beginning consonant sounds, letter sound correspondences, and sound and clusters of sounds that occur in initial and final positions of words. In addition, these children could locate patterns in words or parts of words and visually match items. They also had a better command of "school language," as Downing refers to it, the "reading instruction register" (Downing, 1970).

The most exciting phenomenon the visiting researchers observed in all experimental settings was the child-selected and child-initiated role-playing of the adult act of reading. Children were frequently observed playing at reading, much as they might be observed modeling other adult behaviors such as cooking, housekeeping, building, or caring for babies. This suggests that these children are developing attitudes toward books and toward reading which will serve as a positive foundation for subsequent schooling. Having a whole language program establishes these favorable attitudes regardless of experiential, economic, or cultural backgrounds of the students.

Chapter 4: Developing Attitudes and Values of Literacy

The research team assistant visited each site at least three times during the academic year for the purpose of collecting extensive field notes during the language arts designated portion of each class schedule. Members of the research team had an opportunity to see changes that took place in the course of the year. These researchers noted certain key changes in the experimental groups that were not evident in the control settings used for comparison. Some of these changes, which will be subsequently, discussed include increased attention spans among both preschoolers and kindergarten students, the frequent self-selection of books during play time, and the development of children's concepts about themselves as readers and writers.

Falling in Love With Books

Although most children in the study were sometimes read to by their teachers, the children in experimental settings were read to at least twice daily using predictable or patterned language books, and frequently using big book editions of these when available. In addition to the selected materials, experimental groups used "assisted reading" (Hoskisson, 1975), frequently extending the stories with creative dramatics, art, or music, and/or opportunities to write that were related to the featured book.

Because of the attractive nature of the story predictability in their materials, children in all experimental settings readily

became involved in participating with the reading. In some cases portions of a book or an entire book were memorized by children. Classes would read entire books chorally, in unison. The teacher or care giver would encourage children to focus on the print not only with pointers and assisted reading techniques, but by pausing at times to ask for prediction, to focus on a prominent letter, or to point out marks of punctuation that effect expression.

Soon, children were excited to begin shared reading times each day, and requested favorite titles relentlessly. Four year olds who normally had difficulty sitting still for a lesson of more than five or ten minutes still had difficulty sitting still, but remained focused on the book and continued to participate for up to thirty minutes. In the anecdote that follows, a paraprofessional teacher conducts shared reading for her small group in one experimental preschool classroom. This observation was made in January, 1988. The teacher and all eight students are members of minority groups from a very low socio-economic neighborhood.

Experimental Pre-school Anecdote. The teacher presents a DLM book and, before she can ask the title, children call out "Three Dogs at the Door." Together the children count aloud the dogs on the cover, discuss the author, Roach Van Allen (1986), and discuss what an "illustrator" means. The children curl at the teacher's feet in an organized formation. They are all trying to get as close as possible

to the book. The teacher uses a pointer as the class reads chorally. The teacher points out that the word "mad" looks different from the word "disgusted." The teacher asks individuals to act out how they might look if they felt "disgusted." All eight children say "disgusted," making appropriate intonation and facial expressions as they do.

The children are extremely attentive, with all eyes on the book. They act out the next interesting word which is "upset," the same way they did with the word "disgusted." The teacher discusses with them how they can use these words when they have those feelings, labeling them for the children as "emotion words." They continue reading and come to the word "irritated." They discuss differences between "irritated," "mad," "upset," and "disgusted."

The children have difficulty keeping their hands off the book which is balanced on the teacher's lap. Three children hang on the teacher's knees. They continue reading and come to the word "angry." One boy notices that there is something on the print page that is interesting and points it out to the teacher. She comments positively about how observant he is, and they all continue reading. Another child asks to turn the page, obviously anxious to get on with the story.

The next emotion word is "furious." They all act out "furious" and briefly review the other words they have encountered thus far. One boy calls out, "I'm going to say that at my house."

Michael still cannot keep his hands off the pages of the book, but the children never lose their attention. Some students are difficult for the teacher to manage because instead of staying in one place they are gradually inching up on their "bottoms" closer to the book. She then flips back through the text to each emotion word and asks which, of the ones they discussed, this one is. Each time some children guess correctly, and seem to be using initial letters to assist in their guesses of "disgusted," "furious," etc. (25 minutes have elapsed).

The children are not yet tired of shared reading, and go on to read I'm the King of the Mountain (Cowley, 1984), using song and chiming in on the repeating pattern, "I'm the king of the mountain; I'm the king of the mountain."

When shared reading is over, children are permitted to choose things to do. One child takes a book, sits with the book in her lap in the teacher's reading chair, and asks if she can read the book to the teacher. The teacher gives her minimal support as this child "reads" The Little Red Hen (Parks and Smith, 1985). They discuss the word "wheat" and how it is something found in cereal that they eat in school for breakfast. The child continues to read. Other children from this group have also elected to "read" books either by themselves or in pairs.

This anecdote, which is typical of those collected in the treatment classes, demonstrates the children's reactions to shared reading experiences. Children appear not only

attracted to the books and the shared reading experience, but also drawn to the books on their own. This phenomenon was observed frequently in both the preschool and kindergarten experimental classes. The children frequently chose books over toys during free choice play times, even sometimes asking permission to take the books outside. These groups could be observed "playing" at shared reading experiences, one student acting as the teacher, with a pointer in hand, and those playing "student" reading in unison or taking turns reading. On other occasions, one child might sit alone, even with a less familiar book, and pretend to read by formulating a logical story to accompany the illustrations.

It soon became clear, that children in these experimental settings began to prize books, stories, and the act of reading. Shared reading, while being an instructional strategy, seem to be associated with pleasure by the children. Later, within the same morning, children were asked to "write." Each child had his or her own book, made from several pieces of large construction paper with a wallpaper front and back cover. Children were generally allowed to draw whatever they wished, and were then invited to "say something" about their pictures. They would dictate to a teacher anything from one word up to an entire sentence. As practice for forming letters, the children were then encouraged to copy the teacher's manuscript in the space below each line of print. Most children attempted this, but often tired of copying

before they completed the entire text. All attempts were praised with encouragement such as, "You are getting to be a better writer." These hand-made books became each child's personal property and would be taken home at some point during the year. Children seemed proud and possessive of their books.

One thing that became clear to the visiting researchers, especially during the posttesting in the late Spring, was that the children in the whole language settings differed markedly from their comparison peers in that they **believed** they were readers and writers. For example, during the administering of the Metropolitan ESI, all subjects were asked both to write their names, and to write messages to someone. Nearly all children, both in treatment and comparison groups, could write their names fairly well. However, when subjects were asked to write a message to someone, children in the treatment groups behaved differently. They began to write, even if their writings were scribbled or unrecognizable. Children in comparison groups tended more often to inform the examiner that they did not know how to write, and were less likely to make any attempts, even when urged to "just try." In other words, children in the whole language settings seemed more likely to take risks, perhaps believing that what they produced would be acceptable. In the act of taking a risk, they applied some knowledge about print, whatever their current understandings about written language might have been, and produced something which could be scored by the examiners.

Children in comparison groups typically consented to draw a picture instead.

It would appear as though the children who believed that they were readers and writers engaged in the developmental processes of learning to write, acting as "tacit analyzers" of language (Read, 1971). In cases where children did not believe they were capable of writing, and therefore made no attempts at writing, the children were denied the opportunity to actively engage and practice the process.

Contrasting Views of Curriculum

One of the lessons learned in the course of the study was the differences in the views of curriculum between the treatment and control groups. Certain researchers have suggested that teachers behave differently toward children and their learning when they have different basic assumptions (Harste, Woodward, and Burke, 1984). In the experimental classrooms, teachers seemed to operate on certain assumptions which included:

1. Children can write what they want to say before their knowledge of letter/sound relationships is perfect, and before they can spell conventionally.
2. Children can learn to read as they learn to speak, in a holistic, social context in which functions and purposes for reading are evident.

3. Children learn valuable lessons by collaborating with each other, and their learning can be enhanced by what they learn from each other.

Similarly, in the comparison classrooms, the view of curriculum seemed to proceed from very different, but common assumptions. These included:

1. Children need to achieve a level of readiness for learning to read which includes extensive experience with letters of the alphabet and the sounds those letters may represent. This occurs prior to learning to write.
2. Children are not ready or capable of writing connected text until a certain number of words can be spelled conventionally, and that the prerequisite to writing is the ability to copy and formulate letters.
3. Authentic learning is limited to the learning or work produced by individuals who "do their own work," and learning is the result of what the teacher teaches.

As Harste, Woodward and Burke (1984) suggest, instructional assumptions form the foundation of implementation. The following example from a comparison group preschool illustrates all three of these latter assumptions. This anecdote is from a private, well-funded, highly regarded preschool facility which features a competent, certified teacher whose assumptions are typical of those mentioned.

Control Preschool Group Anecdote. On 11/20/87, Ms. R. cheerfully welcomes her students and introduces us to them, reminding them of our names. Children gather in the carpeted area of the room around their teacher who is seated in a chair next to an easel. After some social conversation with the group, Ms. R. introduces the "special guest," who is a puppet named "Goofy Ghost." She announces they will talk about the letter G this day. The teacher elaborates that Goofy wears glasses and plays a guitar. She develops a story orally, preparing them to participate on a given signal with repeating phrases including "/g/-/g/-/g/-/goo/," and "Goofy, good grief!" On the easel is paper with pockets which hold teacher prepared cards.

As the story is completed, the teacher reviews "G" words with the children, and praises them at the end. She asks the children to give themselves a pat on the back, reviews the "G" words again, and they say "/g/-/g/-/g/-/g/" a few more times. At the end, all children stand up to stretch, and are directed to pretend they are watering cans, and to make /g/ sound like water gushing from the watering cans with "/g/-/g/-/g/" noises.

Next, the teacher initiates a guessing game with questions to "fill in the blank" orally, such as "Something Mommy puts on your mashed potatoes is...," and "You like to chew a stick of...."

The preschoolers are then directed to the writing table where they are told they will do some writing. The teacher gives each of them a ditto page divided into six boxes numbered one to six. Children write their names on their papers. Ms. R. explains that she will flash a card to them, take it away, and then they should write on the paper what they have seen on the flash card. She reminds them to "do their own work," and not to look at anyone else's paper.

She shows them a card containing a circle, displays it about five seconds and then puts the card behind her back. She then asks them to draw what they saw in the box labeled #1. This is repeated with cards containing a vertical line, two parallel horizontal lines, a single horizontal line, two intersecting lines (like an addition sign), and a circle and a line resembling a lollipop.

Language arts time is complete. The children line up to go to physical education.

It is important to note that this teacher who is thoroughly experienced, capable, and highly regarded seemed to be operating from the traditional assumptions mentioned earlier. She believes as many teachers do, that learning is a solo activity, invalidated by interaction, and that there are necessary prerequisites to literacy which include alphabet knowledge, sound-symbol knowledge, and the copying of configurations (Harste, Woodward, and Burke, 1984). These beliefs direct her instructional decisions and

planning. At no time in her lessons were the children exposed to or directed to connected discourse. These children have not been admitted to the "literacy club," (Smith, 1986, p. 38). There is nothing to suggest to the pre-schoolers that their activities have something to do with books, reading, or writing.

It is also important to note an assumption inherent in the selection of materials. Ms. R. has as her objective to have children recognize, sound, and eventually reproduce the letter "G." As this is foremost in her mind, the selection of the story for other criteria is not a consideration. The resulting story of "Goofy" does not contain elements associated with literature such as plot, setting (except the mentioning of a garbage can and a garden), and character development. It lacks integrity as a story, and therefore differs markedly from good literature that children hear, or real stories told at home. The text has been artificially contrived for the sake of instruction. Conversely, a differing view of curriculum that related to materials was observed by the visiting researchers in experimental classrooms during the study. Teachers who use whole language strategies assume that the quality of a story is essential. Whole language materials contain authentic stories with a beginning, a middle, and an end. The language of the text is attractive to children, sounds like language one expects to hear in books and in stories, and is frequently predictable or patterned.

In classrooms where letter knowledge is foremost as an objective, the text quality becomes secondary to the instructional agenda. Texts are contrived, do not sound like book language or story language, and have little, if any, literary value. The following anecdote demonstrates in contrast some of the more whole language assumptions which were seen in operation in the experimental settings.

Experimental Kindergarten Group Anecdote. On 4/28/88, Mrs. G's class, a developmental kindergarten, is chorally reading Mrs. Wishy-Washy (Cowley, 1980). She reminds them that they only read what the "magic stick" points to. Thus, if children have now memorized the text, they must begin to focus on the print, matching their oral utterances with the accompanying text. Although this title is a group favorite, the children had not read it for a while because it had been loaned to a neighboring class.

They read together, everyone participating. One boy points to a page, as if with an "aha," and calls everyone's attention to two words on the page which are the same. The teacher then announces they will read The Jigaree (Cowley, 1983) but, since they know it well, she will divide the group in half. The first half of the group will read the top half of the pages; the other half of the group will read the bottoms. The first group consists of four African-American boys. They are reading in unison with no teacher support.

The second group, five children, are not quite as strong. Since, however, two children out of the five are independently reading, the teacher allows those readers to carry the ball.

Up until this point only half the class were present. The other members had been at the school computer lab. Now these class members return, and the children who had been reading leave for their computer time.

This second group chooses to read One Cold Wet Night (Cowley and Melser, 1980), followed by The Farm Concert (Cowley, 1983). Like the earlier group, these children need very little teacher help, but are reminded to read where the pointer is. After both readings are complete, the teacher asks the children to think about what is the same about the two books. One boy says that both farmers were mad. Another boy says that they are both library books. Katy points out something she noticed that was different. Then, the teacher hints that they should explore the feelings of the farmer. One girl says they both had a farmer who was angry. The teacher prompts them a little more and helps them to see that both farmers wanted to sleep, but had a problem. They discuss how each farmer solved his problem.

The next selection is The Meanies (Cowley, 1983). The teacher suggests that since this is a very "yucky" story, they could help her think of other "yucky" things for the

story. For example, using "post-its," the teacher asks for an idea other than "rubbish tins" in which the Meanies could sleep in. Someone suggests "spider webs". The teacher writes "spider webs" on the "post-it" and covers the original text. The class rereads the page, substituting the child's contribution. This continues throughout the story. Children appear visibly pleased at altering the text, especially the particular child who has contributed a phrase. Class members laugh and giggle in delight as they read their new version. They contribute such ideas as "Meanies eat out of dirty tires and garbage cans," "Meanies eat raw frogs and nasty snakes," and "Meanies drink blood." As they read they make faces, and "Oooh" noises as they express disgust at what Meanies do in this edited version of the story.

Children move into writing time and take their "journals" which are made of wallpaper and construction paper. Some children write completely on their own, using invented spellings that adults can usually decipher. Several students still copy text from nearby classmates or from environmental print. Certain children obviously prefer to give dictation to their teacher. Many can read their own dictation accurately while a few others still do not attend to specific features of print.

Again, certain assumptions are apparent in this teacher's planning. Both reading and writing are viewed as developmental in

nature. Children operate from their individual standpoints in their emerging literacy by participating in authentic, purposeful reading and by producing purposeful writing. The children see themselves as readers and writers, take risks with their developing knowledge, and apply what they are learning. Language learning is in the same context as it is in the real world in an environment rich in activities related to reading, writing, listening, and speaking.

Conclusion

Musgrove (1987), who studied her developmentally immature kindergarten students in Tampa, followed their emerging notions about reading and writing in her traditional classroom. In her year-long naturalistic study, three of the least mature children who had entered kindergarten with no prior experience with books never figured out that print was supposed to have meaning. Her curriculum was traditional in nature except for the addition of journal writing. The three immature kindergartners adapted to journal writing by copying letters and words from other children or from environmental print. Writing was to them like the activity in Ms. R's preschool in which configurations were copied for the sake of copying. The other subjects in Musgrove's class who entered kindergarten with some experience with books and connected discourse did eventually figure out that writing could convey meaning and that print in the room could actually say something. Musgrove theorized in her conclusions that the context

for literacy learning which was missing in her traditional curriculum would have been supplied in a whole language classroom environment. This environment would have provided the essential context for literacy, especially in cases where children had had no prior experience with books.

Confirming what Musgrove has suggested, the results of this current study speak powerfully to the advantages of literacy instruction rooted in the whole language philosophy, rather than instruction based on more traditional views. However, perhaps the most important benefits, benefits which could enrich the children throughout their lifetimes, were not directly assessed by the test scores. However, through observations, it seems that the children in the whole language classrooms developed positive attitudes about learning and about themselves as learners.

It is hoped that teachers, administrators, parents, and others interested in literacy instruction will not only read the ever growing body of research on whole language instruction, but will also visit some of these exciting classrooms where children are living and learning their language. Let's be secure in the knowledge that there is no substitute for authentic learning, whether judged by test scores or by the quantity and quality of books children choose to read.

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